Remarks

The above-referenced application has been reviewed in light of the Examiner's Advisory Action mailed on Decemebr 11, 2006. Claims 2-5, 7-10, 12-15 and 17-20 are currently pending in this application. The Examiner's entry of the prior amendment and reconsideration of the rejections is respectfully requested, particularly in view of the following remarks.

In accordance with the Advisory Action, the Examiner states that Applicants' Amendment dated November 13, 2006 is non-responsive because it fails to point out where "each and every" means-plus-function feature of Claims 17-20 is described in the specification. It is noted that the Examiner did not clearly ask about "each and every" feature in the original Office Action, but asked specifically about the the searching means, which Applicants pointed out in the specification, and the difference between the comparing means and the plurality of comparing means, which Applicants addressed with amendments to the claims. Although it is not Applicants' responsibility to point out correspondences between the specification and subject matter included in the originally filed claims, which themselves constitute a part of the original specification, further references for these and other means-plus-function clauses are presented below.

As discussed in Applicants' Amendment dated November 13, 2006, exemplary "searching means for searching within the CAM device" are described in terms of matchlines in the specification as originally filed (*see, e.g.*, Application at page 5, lines 8-18; page 6, line 24 through page 7, line 17). Thus, the presently claimed "searching

means" comprises one or more matchlines for finding matching words in segments of a CAM, without the need to discharge all of the other matchlines for every search cycle. In addition, since each matchline does not connect to all cells in a wordline, its capacitance does not increase as the CAM gets wider. Thus, as the widths of CAMs increase, the presently claimed searching means substantially avoids the decreased operating speed and increased power consumption of conventional CAM architectures.

Exemplary "receiving means for providing an input word to the CAM device" are described as comprising searchlines or as flip-flops at page 5, lines 20-22, for example. Exemplary "first comparing means for comparing a portion of the input word in a segment of the CAM device" are described as comprising segments at page 2, lines 24-26; and page 4, lines 2-5, for example. Exemplary "propagating means for propagating a mismatch to obviate a need for comparison in other segments of the CAM device" are described as comprising sinklines at page 6, lines 15-23, for example. Exemplary "second comparing means for comparing the input word with data from a plurality of wordlines" are described as comprising segments at page 4, lines 2-5, for example. Exemplary "matching means for propagating a match or mismatch on a matchline" are described as comprising matching lines or matchlines throughout the specification. Exemplary "grounding means for grounding through a sinkline when a mismatch is found in the segment" inherently comprise ground potential nodes or simply grounds as referenced throughout the specification.

Exemplary "gap logic means between each segment for propagating the matchline and sinkline information from segment to segment" are described as

comprising pipe blocks at page 5, lines 14-18, for example. Exemplary "pipeline means for searching in a pipeline process" are described as comprising searchline pipeline logic and driver block circuits at page 5, lines 20-21, for example. Exemplary "continuation means for continuing a first search into a second segment of a first row when a first segment of the first row is completed" are described as comprising flip-flops at page 6, line 27 through page 7, line 9, for example. Exemplary "synchronization means for starting a second search to proceed on a first segment of a second row at the same time that the first search is continued into the second segment of the first row" are described as comprising a synchronization clock at page 5, lines 20-22, for example. Exemplary "mismatching means wherein the search procedure on any row will not be continued when a mismatch is detected in any segment of that row" are described as comprising a matchline connected to ground at page 6, lines 15-23, for example.

In accordance with the Advisory Action, the Examiner states that Applicants' Amendment dated November 13, 2006 is non-responsive because it fails to point out where the specification discloses that the "same-size segment" is critical to the invention. Applicants are not required to argue that any one feature is critical to an invention as claimed, since it is the particular combination of features that defines the scope of the claim. In this case, Applicants argued in the Amendment dated November 13, 2006, that Proebsting et al. fail to show that each of the plurality of segments is substantially the same size, and that the Proebsting reference actually teaches away from equally sized segments by advocating hierarchical segments in which each successive segment is larger than the preceding segment. The Examiner cites

Proebsting at col. 9, lines 25-30, and col. 12, lines 41-62 for a showing that the segment sizes may be arbitrary. Applicants traverse.

Applicants submit that while Proebsting mentions in passing that the size *increase* for successive segments may be arbitrary, there is no teaching or suggestion that Proebsting had even contemplated, much less suggested, that said size *increase* could be non-positive. That is, all of Proebsting's embodiments and claimed advantages are directed towards hierarchical segments of *increasing* size (e.g., +2, +6, etc.). A very broad interpretation of Proebsting might fairly hold that the particular *increase* in size per segment may be an arbitrary *positive or non-zero* integer (*see, e.g.,* Proebsting at col. 12, lines 30-47; col. 15, lines 16-34). Applicants' presently claimed invention has substantially same-sized segments, that is, no increase at all or the *zero* integer. Thus, there is never an increase for successive segments in Applicants' claimed invention, but there is always an increase for succesive segments in Proebsting's disclosure.

Conclusion

Accordingly, it is respectfully submitted that independent Claims 2, 7, 12 and 17 are in condition for allowance for at least the reasons stated above. Since Claims 3-5, 8-10, 13-15 and 18-20 each depend from one of the above claims and necessarily include each of the elements and limitations thereof, it is respectfully submitted that these claims are also in condition for allowance for at least the reasons stated, as well as for reciting additional patentable subject matter. Thus, each of Claims 2-5, 7-10, 12-15 and 17-20 is in condition for allowance. All issues raised by the Examiner having been addressed, reconsideration of the rejections and an early and favorable allowance of this case are earnestly solicited.

Respectfully submitted,

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